

# **TITLE 312 NATURAL RESOURCES COMMISSION**

## **Emergency Rule LSA Document #11-432(E)**

### **DIGEST**

Temporarily adds noncode provisions to govern the permitting, spacing, bonding, construction, and completion of coal bed methane wells under IC 14-37 and to assist with the implementation of P.L.140-2011 (SEA 71-2011). Effective August 1, 2011.

**SECTION 1. (a) This document applies to coal bed methane wells, including noncommercial coal bed methane wells, for which a permit is required or issued under IC 14-37, and supplements 312 IAC 16.**

**(b) To the extent a requirement in 312 IAC 16 conflicts, the requirements of this document control.**

**SECTION 2. (a) Except as provided in this SECTION, the definitions contained in IC 14-8-2, 312 IAC 1, and 312 IAC 16-1 apply throughout this document.**

**(b) In addition to the definitions contained in subsection (a), the following definitions apply:**

**(1) "Additive" or "additive product" means any substance or combination of substances having a specified purpose that is combined with a base fluid (typically water) and proppant (typically sand) to create a fluid that is pumped into a formation during the hydraulic fracturing process. Examples of common additives are acids, biocides, breakers, buffers, corrosion inhibitors, crosslinkers, demulsifiers, fluid loss additives, friction reducers, gels, iron control agents, oxygen scavengers, pH adjusting agents, scale inhibitors, stabilizers, and surfactants.**

**(2) "Coal owner" means a person vested with a whole or undivided fee simple interest or another freehold interest in the coal estate. The term does not include a person with a leasehold or another lesser estate.**

**(3) "Coal lessee" means a person, other than a coal owner, with a present right to extract coal, including a person having the right by virtue of a lease, sublease, license, mining agreement, grant of a term of years, or similar interest.**

**(4) "Division" refers to the division of oil and gas established under IC 14-9-4-1(15).**

**(5) "Division director" refers to the director of the division.**

**(6) "Drilling unit" means the acreage allotted to a production well taking into consideration the maximum acreage that can be efficiently and economically drained by a single well from a specified formation. Owners of oil and gas interests in the allotted acreage are entitled to share in the production from the well.**

**(7) "Horizontal drain hole" means the portion of a wellbore with seventy (70) degrees to one hundred ten (110) degrees deviation from the vertical drilled at least one hundred (100) feet into the producing interval beginning at the point where the wellbore**

penetrates the producing interval and ending at the farthest point drilled within the producing interval.

(8) "Horizontal well" means any well that is developed with at least one (1) horizontal drain hole.

(9) "Material safety data sheet" or "MSDS" is a form with data regarding the properties of a particular substance which meets the requirements of the United States Occupational Safety and Health Administration Hazard Communication Standard under 29 CFR 1910.1200(g).

(10) "Well stimulation" means a treatment performed to restore or enhance the productivity of a well. Stimulation treatments consist of two (2) main groups:

(A) fracturing treatments; and

(B) matrix treatments.

Fracturing treatments are performed above the fracture pressure of the reservoir formation and create a highly conductive flow path between the reservoir and the wellbore. Matrix treatments are performed below the reservoir fracture pressure and generally are designed to restore the natural permeability of the reservoir following damage to the near-wellbore area.

(11) "Hydraulic fracturing" means the process of pumping fluids into a closed wellbore with powerful hydraulic pumps to create sufficient downhole pressure to crack or fracture the formation which allows the injection of a proppant into the fractures, thereby creating a high-permeability plane through which fluids can flow.

(12) "Proppant" means sized particles, typically sand, mixed with hydraulic fracturing fluid to hold fractures open after a hydraulic fracturing treatment.

SECTION 3. (a) This SECTION establishes requirements for permit applications for coal bed methane wells. The requirements of this SECTION are in addition to the permit application requirements in 312 IAC 16-3.

(b) The division shall prescribe forms for use to apply for a coal bed methane well permit. The forms, including instructions for completing the forms, shall include sufficient information to comply with IC 14-37 and this document.

(c) An application for a coal bed methane well permit must include detailed plans for any of the following, if proposed to be conducted under the permit:

(1) Well stimulation operations including the following information:

(A) The source and proposed volume of base stimulation fluid to be used.

(B) A description of each additive product proposed to be included in the well stimulation program including:

(i) The proposed rate or concentration of the additive product expressed, for example, as pounds per thousand gallons, gallons per thousand gallons, pounds per gallon, percent by weight, percent by volume, parts per million, or parts per billion.

(ii) The product name as identified by the manufacturer on the material safety data sheet.

(iii) A description of the type of or purpose for each additive. Examples of additives include acid, biocide, breaker, brine, corrosion inhibitor, crosslinker, demulsifier,

friction reducer, gel, iron control, oxygen scavenger, pH adjusting agent, proppant, scale inhibitor, surfactant, and any similar substance.

(iv) A copy of any MSDS for each additive product.

(C) The proposed well stimulation design including the following:

(i) Identification of each coal seam to be stimulated.

(ii) Proposed casing and cementing plan for the well.

(iii) Identification of the principal strata above and below each coal seam.

(iv) The anticipated surface treating pressure range.

(v) The maximum injection treating pressure.

(vi) Face and butt cleat orientation that is known for each coal seam.

(vii) The estimated or calculated fracture half length and fracture height that is known.

(viii) A demonstration that coal seams outside the coal bed methane production area would not be adversely affected by hydraulic fracturing operations and would be adequately protected for future underground mining.

(D) A plan for the flushing of fluids from the well following completion of well stimulation operations including the management and disposal of flow back fluids and solids.

(2) In addition to the requirements in subdivision (1), if hydraulic fracturing operations are proposed, the applicant must identify all of the following which are located within the greater distance of a radius of either five hundred (500) feet or the estimated or calculated fracture half length, from the proposed coal bed methane well:

(A) Known water wells including water wells identified on the online water well record database of the department's division of water.

(B) Known oil or gas wells, test holes, or borings which penetrate the coal seam to be hydraulically fractured.

(3) If wells, test holes, or borings are identified under this subsection, and the division determines there is a significant risk they may serve as potential pathways for well fluids into underground sources of drinking water, the division director may require the applicant to do the following:

(A) perform remedial plugging operations; or

(B) take other reasonable measures, including modifying the hydraulic fracturing plan; so adverse impacts to underground sources of drinking water are not likely to occur as a result of the hydraulic fracturing operations.

(4) If horizontal wells are proposed to be completed in a commercially minable coal resource, the application must include the following information:

(A) The proposed length and orientation of each horizontal drain hole and the measures that would be taken to ensure the drain hole does not deviate into strata above or below the coal seam.

(B) Unless a coal owner gives written consent under subsection (d)(5) or a coal owner and coal lessee give written consent under subsection (d)(4), a plan for plugging and abandoning the horizontal drain hole portion of the well upon abandonment of the well, including types and amounts of plugging materials to plug the horizontal drain hole. The plugging and abandonment plan must include sufficient information to demonstrate the methods and materials used would not result in waste of a commercially minable coal resource.

- (d) An application for a coal bed methane well permit must include the following:**
- (1) The names and addresses for the following:**
    - (A) The surface owner of the property on which the well is to be located as reflected in the county tax duplicate records or the last known address of the most recent owner shown in the county transfer book.**
    - (B) The owners of each coal seam through which the applicant's well would penetrate.**
    - (C) Any lessee of a coal seam through which the applicant's well would penetrate.**
  - (2) Proof the applicant has complied with notification to the surface owner identified under subdivision (1)(A) as required by IC 32-23-7-6.5. Except as provided under clause (C), the notification to the surface owner must follow the sample format prescribed by the division. Any of the following are acceptable for demonstrating proof of surface owner notification:**
    - (A) A certified mail receipt accompanied by a copy of the written notification to the landowner;**
    - (B) A written statement from the surface owner acknowledging receipt of the notification; or**
    - (C) A copy of a written agreement with the surface owner establishing different notification terms.**
  - (3) At least one (1) of the following:**
    - (A) written consent to the drilling of the coal bed methane well from any coal owner and coal lessee identified under subdivision (1)(B) and (1)(C); or**
    - (B) proof of notification to the coal owners and coal lessees identified under subdivision (1)(B) and (1)(C) of the applicant's intent to apply for a coal bed methane well permit. Proof of notification to a coal owner or coal lessee may be demonstrated by either of the following:**
      - (i) a certified mail receipt accompanied by a copy of the written notification to the coal owner and coal lessee; or**
      - (ii) a written statement from the coal owner and coal lessee acknowledging receipt of the notification.**
  - (4) If coal is subject to a lease, the written consents provided by a coal owner and a coal lessee under subdivision (3)(A) must include a statement acknowledging the recovery of coal bed methane may result in waste of the commercially minable coal resource.**
  - (5) If coal is not subject to a lease, the written consent provided by the coal owner under subdivision (3)(A) must include a statement the coal owner has not leased the coal for coal mining purposes and acknowledging the recovery of coal bed methane may result in waste of a commercially minable coal resource.**
  - (6) If written consent to the drilling of the coal bed methane well cannot be obtained from a coal owner or coal lessee as required under subdivision (3)(A), in addition to the proof of notification required under subdivision (3)(B), the applicant must submit an affidavit certifying that, upon diligent inquiry, the activities of the applicant with respect to drilling, completing, operating, and abandoning of a coal bed methane well would not result in waste of any commercially minable coal resource and would not endanger the health and safety of underground coal miners. As used in this subdivision, "diligent inquiry" includes reference to the following:**

- (A) the record of filings maintained by the department and made by coal owners and lessees under IC 14-8-2-47; and**
- (B) publicly available records pertaining to the thickness and depth of coal that could be regarded as commercially minable coal resources as defined at IC 14-8-2-47.**

**SECTION 4. (a) This SECTION establishes procedures for a person, with experience in mining commercially minable coal resources, to file a request for notification with the division if a complete application for a coal bed methane well permit is filed.**

**(b) A person wishing to receive a notice under this SECTION must submit a written request to be added to a list which the division shall maintain.**

**(c) Requests under this SECTION must include the following information:**

- (1) sufficient information to demonstrate that the person is experienced in the mining of commercially minable coal resources;**
- (2) the name, title, mailing address, e-mail address, and telephone number of the person to whom notifications shall be sent; and**
- (3) the name of the county or counties of interest.**

**SECTION 5. (a) This SECTION establishes requirements for notifying potentially affected persons of the filing of complete applications for coal bed methane well permits and for the filing of comments or objections to the issuance of permits for coal bed methane wells.**

**(b) Upon receipt of an application for a coal bed methane well permit, the division shall review the application to determine whether the application is substantially complete and includes the information required by SECTION 3 of this document.**

**(c) If an application for a coal bed methane well permit is not substantially complete, the division shall promptly notify the applicant of what additional information is required. If the applicant fails to respond or does not provide the division with the required additional information within thirty (30) days of notification under subsection (b), the division may return the application to the applicant and terminate the permit review process.**

**(d) Upon determining an application is substantially complete, the division shall publish notice of the receipt of the permit application on its website. At a minimum, the website shall include the following information:**

- (1) Permit filing date and assigned permit number.**
- (2) Name and address of the applicant.**
- (3) Lease name and well number.**
- (4) Well type.**
- (5) Location of the proposed well by section, township, range, and county.**
- (6) The proposed depth of the well and the coal seams affected.**
- (7) Instructions for downloading a copy of the permit application and for filing comments or objections, including the deadline for submitting comments or objections established under subsection (g).**

**(8) The address to which comments or objections must be submitted.**

**(e) Within fifteen (15) days of the date an application is determined under subsection (d) to be substantially complete, the division shall provide written notice of the application filing to the following:**

- (1) Each person identified on the division's list of interested persons.**
- (2) Any coal owner, lessee, or other person with an interest in developing coal resources who has filed an affidavit with the division under IC 14-37-7-8.**
- (3) The surface owner of the property on which the well is to be located as identified under SECTION 3(d)(1)(A) of this document.**

**(f) The notification provided under subsection (e) shall include the following:**

- (1) The permit filing date, name and address of the applicant, permit number, lease name, well number, well type, and the location of the proposed well by section, township, range, and county.**
- (2) The proposed depth of the well and the coal seams affected.**
- (3) Instructions for downloading a copy of the permit application from the division's website.**
- (4) Instructions for the filing of comments or objections, including the deadline for submitting comments or objections under subsection (g).**
- (5) The address to which comments or objections must be submitted.**

**(g) The deadline for filing of comments or objections to the division under this SECTION shall be as follows:**

- (1) For purposes of subsection (d), thirty-three (33) days from the date of publication of the receipt of the complete application on the division's website.**
- (2) For purposes of subsection (e), thirty-three (33) days from the date of the division's notification letter.**

**SECTION 6. (a) This SECTION establishes requirements for approval (including approval with conditions) or denial of permits for coal bed methane wells. The requirements of this SECTION are in addition to the permitting requirements of 312 IAC 16-3.**

**(b) The division shall not issue a permit under this rule unless the following requirements are met:**

- (1) The comment period provided under SECTION 5(g) of this document has elapsed.**
- (2) Proof of both of the following has been submitted by the applicant to the division:**
  - (A) Receipt of the written notice to the coal owner and coal lessee if required under SECTION 3(d)(3) of this document.**
  - (B) Receipt of the written notice to the surface owner as required under IC 32-23-7-6.5 and SECTION 3(d)(2) of this document.**
- (3) The division has considered:**
  - (A) Any comments or objections received during the comment period provided under IC 14-37-4-8(d)(1) and SECTION 5(g) of this document.**

**(B) Objections filed on the basis of waste of a commercially minable coal resource or endangerment to the health and safety of underground coal miners by a person receiving notification under SECTION 5(e) of this document. The division shall not consider objections submitted by a person who filed an affidavit under IC 14-37-7-8, if the coal owner and any coal lessee have given written consent under SECTION 3(d)(4) or 3(d)(5) of this document.**

**(4) The applicant has demonstrated sufficiently under SECTION 3(c)(1)(C)(viii) of this document that commercially minable coal seams outside the coal bed methane production area are protected for future underground mining.**

**(5) If well stimulation operations are proposed, the division director has reviewed the plan information provided under SECTION 3(c)(1) of this document and determined, based on the information provided by the owner or operator and other reasonably available information, that the proposed well stimulation operations do not appear to pose a risk of unreasonably impacting underground sources of drinking water.**

**(6) Except as provided in SECTION 3(d)(6) of this document, the applicant submitted proof of consent, under SECTION 3(d)(3)(A) of this document, by all coal owners and coal lessees.**

**(7) If all coal owners and coal lessees have not given consent to coal bed methane production under SECTION 3(d)(3)(A) of this document, and the applicant is proposing to conduct any of the following:**

**(A) Hydraulic fracturing.**

**(B) Horizontal drilling in the coal seam.**

**(C) Another activity that disturbs the integrity of either or both of the following:**

**(i) the coal seam; or**

**(ii) the strata surrounding the coal seam;**

**the permit shall not be issued unless the division director finds, after review of the affidavit submitted by the applicant under SECTION 3(d)(6) of this document and any other information available to the division director, that the drilling, completion, operation, plugging, and abandonment of the coal bed methane well will not result in waste of a commercially minable coal resource or endangerment of the health and safety of underground coal miners.**

**(8) The division director makes a written finding that the requirements of this subsection have been met.**

**(c) Unless waived by the applicant, the division director shall issue or deny a permit under these rules within fifteen (15) days after the lapse of the comment period specified under SECTION 5(g) of this document.**

**(d) A permitting decision by the division director is a final agency action and is subject to review by aggrieved or adversely affected persons under IC 4-21.5.**

**(e) Notice of a permitting decision, including instructions for seeking administrative review under IC 4-21.5, shall be sent by the division director to the applicant and to the following:**

**(1) Surface owners, coal owners, and coal lessees identified by the applicant under SECTION 3(d)(1) of this document.**

**(2) Each person who filed with the division written comments or objections to the permit.**

**(f) Notice of the permit decision and instructions for filing for review under IC 4-21.5 shall be posted on the division's website within three (3) working days following approval or denial of the permit.**

**SECTION 7. (a) This SECTION establishes drilling unit and spacing requirements for vertical and directional coal bed methane wells.**

**(b) The following coal bed methane wells are exempt from the drilling unit and spacing requirements of this SECTION:**

**(1) a noncommercial coal bed methane well, if:**

**(A) not located within six hundred sixty (660) feet from an existing commercial coal bed methane well producing from the same coal seam; or**

**(B) a written waiver is granted by the adjacent well owner; and**

**(2) coal bed methane wells producing methane from any of the following:**

**(A) a void created by mining out a coal seam;**

**(B) a pillar inside the mined out area of an abandoned underground coal mine; or**

**(C) gob created by longwall or other methods of coal extraction.**

**(c) Except as otherwise provided in this SECTION, drilling units for vertical and directional coal bed methane wells shall consist of a quarter quarter section of land containing forty (40) acres more or less as established by the rectangular surveying system of the official public land survey of the state.**

**(d) Where irregular sections contain more or less than six hundred forty (640) acres, rectangular drilling units shall be established as closely as practicable to a regular quarter quarter section but may be more or less than forty (40) acres proportionately based upon the size of the irregular portion of the section.**

**(e) Where the land survey system consists of rectangular shaped survey units of similar size, including donations, military grants, and similar circumstances, the division director may approve rectangular drilling units of uniform size derived from regular subdivisions closest in size to the drilling unit specified under subsection (c).**

**(f) Where the land survey system consists primarily of irregularly shaped survey units including, locations, surveys, reserves, and similar circumstances, the division director may approve alternate drilling units established by a uniform grid overlaid upon the irregularly shaped survey units to define the boundary and size of individual drilling units. The size of the drilling units within the grid shall be approximately the same size as drilling units specified under subsection (c).**

**(g) If all the area within an individual drilling unit specified under subsections (c) through (f) is communitized or otherwise under common ownership or control by the operator, more than one (1) coal bed methane well may be drilled within the drilling unit, if:**



**(1) The operator demonstrates to the division director that drilling additional wells is reasonably necessary for more efficient recovery of methane and would not result in waste.**

**(2) The wells meet the spacing requirements of subsection (i).**

**(h) The division director may approve a drilling unit plan with spacing for other than forty (40) acres per well, if an operator demonstrates each of the following:**

**(1) Plans to drill multiple wells within an area of common development larger than forty (40) acres; and**

**(2) The area within the common development area is pooled or otherwise under common ownership or control by the operator;**

**(3) The alternate drilling unit plan is necessary for more efficient recovery of methane and would not result in waste.**

**(4) Wells meet the spacing requirements of subsection (i).**

**(i) The division director may approve drilling units smaller than those specified in subsections (c) through (f) if the applicant demonstrates geologic features within the unit justify the smaller sizes. An example is an area where washouts or cutouts are of sufficient size and nature that coal and associated formations capable of containing methane are not present within a significant portion of a standard drilling unit boundary. Before approving an alternate drilling unit size under this subsection, the division director shall consult with owners of coal bed methane interests whose property would be excluded from the standard drilling unit and provide them with an opportunity to review and object to the applicant's request.**

**(j) The location of vertical or directional coal bed methane wells shall not be less than three hundred thirty (330) feet from the boundary of any adjacent coal bed methane drilling unit not owned or controlled by the applicant, unless:**

**(1) a written waiver is granted by the owners of the coal bed methane in the drilling unit adjacent to the proposed well; or**

**(2) the applicant demonstrates the closer spacing would not result in significant drainage of methane from the adjacent drilling unit that would otherwise be economically recoverable from a coal bed methane well drilled on the adjacent drilling unit.**

**SECTION 8. (a) This SECTION establishes drilling unit and spacing requirements for horizontal coal bed methane wells.**

**(b) A coal bed methane well may be developed with one (1) or more horizontal drain holes drilled from a single vertical wellbore and may be considered a single well and permitted under IC 14-37, 312 IAC 16, and this document.**

**(c) A horizontal well must satisfy SECTION 7(j) of this document at every point along the horizontal drain hole portion of the well.**

**(d) If a horizontal drain hole would extend beyond the boundary of the drilling unit established by SECTION 7(c) through 7(f) of this document, the horizontal well drilling**

**unit must include all contiguous drilling units through which the horizontal drain hole would be drilled.**

**(e) The surface location and vertical portion of the horizontal well may be located on property outside the boundary of the horizontal well drilling unit, if the property is owned or leased by the operator.**

**SECTION 9. (a) This SECTION establishes requirements for the construction and completion of coal bed methane wells and for reporting to the division.**

**(b) Coal bed methane wells must be constructed according to the casing and cementing requirements of 312 IAC 16-5-9.**

**(c) Unless specified otherwise in this SECTION, well logs and completion or recompletion reports must be submitted to the division under 312 IAC 16-5-17.**

**(d) If a directional or horizontal coal bed methane well is drilled, a directional survey must be made and a copy provided to the division along with any other well completion records required under 312 IAC 16-5-17. The survey must also identify any locations where the horizontal drain hole deviated into strata above or below the coal seam.**

**(e) If an operator makes a substantial change to an approved well stimulation plan, a revised plan must be submitted to the division for review and approval before the operator commences well stimulation. For purposes of this subsection, a substantial change includes each of the following:**

- (1) A change in the source of base carrier fluid to the use of a base fluid other than the use of water, produced water, or other base fluids as previously identified.**
- (2) An increase of more than fifty percent (50%) from the maximum total volume of base fluid as previously specified.**
- (3) An increase of more than twenty-five percent (25%) from either the maximum surface treating pressure or the injection treating pressure as previously identified.**

**(f) The division shall prescribe a form for a coal bed methane operator to report the details of well stimulation operations on a well. The operator must submit a completed form when the well completion or recompletion report is filed under 312 IAC 16-5-17. The report must include the following information:**

- (1) The volume and source of base stimulation fluids used.**
- (2) The type and amount of proppant used.**
- (3) The volume and description of each additive product used, including each of the following:**
  - (A) The rate or concentration of the additive product expressed (for examples) as pounds per thousand gallons, gallons per thousand gallons, pounds per gallon, percent by weight, percent by volume, parts per million, or parts per billion.**
  - (B) The trade name of the additive product used as identified by a manufacturer on the MSDS.**
  - (C) A description of the type of or purpose for each additive product used.**

(D) Unless a copy was previously submitted to the division, a copy of the MSDS for each additive product used.

(4) The maximum surface treating pressure and injection treating pressure.

(5) Any other information reasonably required by the form.

(g) Copies of the following additional information must be submitted along with the well stimulation report:

(1) Well service company job tickets or similar reports which provide a summary of the products used and the services performed with respect to the well stimulation operation. The reports are not required to include cost information for the products or services used.

(2) Pressure recording charts or graphs generated during hydraulic fracturing operations.

(3) All logs or surveys performed to calculate or map the fracture length and height.

(h) Following a review of the well stimulation report or other physical evidence, if the division determines that hydraulic fracturing operations conducted by an operator have the potential to result in an adverse impact upon underground sources of drinking water, the operator may be required to monitor groundwater and take other measures necessary to survey the potential extent of an adverse impact and to protect groundwater users from adverse impacts resulting from the hydraulic fracturing operations.

**SECTION 10.** This document is effective August 1, 2011.

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## **Indiana REGISTER**

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